CLAIMS

1. A dual incremental optical angular encoder, comprising at least one disc bearing marks and two pairs of cells (C1, C2; C'1, C'2) for detecting marks, each pair of cells providing a logic state consisting of a pair of logic levels allowing the determination of an increment of rotation +1 or -1 when the disc revolves, this encoder being characterized in that it comprises means for comparing at a given instant a sequence of four successive states S0, S1, S2, S3 taken by the first pair of cells, with a sequence of four successive states S'0, S'1, S'2, S'3 taken by the second pair of cells, the last states S3 and S'3 of these sequences being the states taken at the instant at which the comparison is made, and means for providing an indication of erroneous counting if the sequence S'0, S'1, S'2, S'3 is not equal to S0, S1, S2, S3 or Sx, S0, S1, S2, or S1, S2, S3, Sy, in which Sx represents a prior state of the first pair and Sy is a possible state of the first pair such that the increment in passing from S3 to Sy is not greater than 1 in absolute value.

2. The angular encoder as claimed in claim 1, characterized in that the means for comparing comprise means for verifying whether the sequence taken by the second pair of cells is equal to Sx, S0, S1, S2, in which Sx is the state of the first cell immediately prior to S0, and these means comprise for this purpose means for storing a sequence of states of the first pair of cells comprising the five states prior to the moment at which the comparison is made.

3. The angular encoder as claimed in claim 1, characterized in that the means for comparing comprise means for verifying whether the sequence taken by the second pair of cells is equal to Sx, S0, S1, S2 where Sx is any state which differs from the state S0 by at

most one unit.

4. A method for ensuring the security of operation of a dual optical angular encoder comprising two pairs of cells for detecting marks on a disc, these pairs of cells providing logic states whose succession determines increments of rotation of the encoder, this method being characterized in that at a given instant the sequences of four successive states taken by the two pairs of cells before this instant are compared and the transition indications given by the two pairs are validated if the sequence of four states for a pair is either identical to the sequence of the other pair, or phase-offset by at most one state, ahead or behind, with respect to the sequence of the other pair.